



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/438,365	11/12/1999	Yongliang Chu	61-03	9217
7590 02/25/2004				
GREENLEE WINNER AND SULLIVAN PC		EXAMINER		
5370 Manhattan Circle Suite 201		EPPS FORD, JANET L		
Boulder, CO 80303		ART UNIT PAPER NUMBER		
		1635		

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/438,365

### Applicant(s)

CHU ET AL.

### Examiner

Janet L. Epps-Ford, Ph.D.

### Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 111 and 112 is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5-30-03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

Continuation of Disposition of Claims: Claims pending in the application are 10,12-14,16-19,21-36,38,40,41,43,44,46,47,49-62,64-69,71-76,78-92,101,102,104,107-109 and 111-112, 117-134.

Continuation of Disposition of Claims: Claims rejected are 10,12-14,16-19,21-36,38,40,41,43,44,46,47,49-62,64-69,71-76,78-92,101,102,104,107-109 and 117-134.

Art Unit: 1635

## DETAILED ACTION

### *Response to Amendment*

#### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 10, 12-14, 16-19, 21-36, 38, 40-41, 43-44, 46-47, 49-62, 64-69, 71-76, 78-92, 101-102, 104, 107-109, 117-134 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 117-236 of copending Application No. 10/629,522. Although the conflicting claims are not identical, they are not patentably distinct from each other because the specific compounds recited in the instant claims represent distinct species of the broad genus of compounds encompassed by claims 117-236 of the copending application. Although each species claimed in the instant application are not specifically named, the instantly claimed species are obvious variants of the broad genus of compounds set forth in the copending application. Each substituent of the instantly claimed species are clearly delineated in the formulas recited in the instant claims and can be clearly envisaged within the recited formulas.

Art Unit: 1635

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

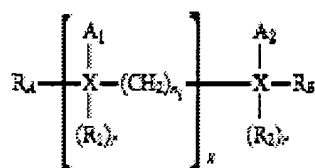
***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

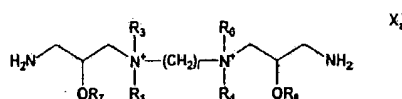
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haces et al. (US Patent No. 5,834,439.

Haces et al. discloses polycationic compounds of the following formula (see col. 3, lines 50-57:



This formula specifically delineates wherein X may be selected from N (see col. 3, line 59), x =1, and substituents A1-A2 may be selected from Z3 which is a straight chain or branched alkyl group substituted with one or two OH, SH, NH2 or amine groups within about 3 carbon atoms of the bond between Z3 (or A1-A2) and X (see col. 4, lines 17-20). This embodiment of Haces et al. clearly suggests the design of compounds of according to claim 12 which discloses compounds of the following formula, particularly wherein there is a straight chain alkyl of 3 carbons substituted with an OH and an NH2.



Art Unit: 1635

The compounds represented by the formula recited in claim 12 represent an obvious variation of a preferred embodiment of the compounds of Haces et al.

Therefore, the invention as a whole would have been *prima facie* obvious of Haces et al. at the time the invention was made.

5. The allowability claims 10, 12-14, 16-19, 22-28, 30-41, 43, 44, 46, 47, 49-62, 64-69, 71-76, 78-92, as set forth in the prior Office Action is withdrawn in view of the new grounds of rejection set forth above.

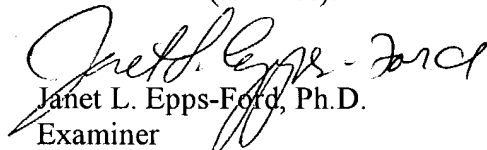
6. Claims 111-112 are allowable over the prior art.

Art Unit: 1635

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet L. Epps-Ford, Ph.D. whose telephone number is 571-272-0757. The examiner can normally be reached on Monday-Saturday, Flex Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John L. LeGuyader can be reached on 571-272-0760. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Janet L. Epps-Ford, Ph.D.  
Examiner  
Art Unit 1635

*JLE*